

Remarks

Claims 1-15 and 19- 21 are pending, claims 19 and 20 are withdrawn.

Claims 1 and 2 are amended.

Claims 3-5, 9, 11, 13, and 14 are original.

Claims 6-8, 10, 12, 15 and 21 are as previously presented.

Claims 19 and 20 are withdrawn.

The application contains claims 1-15, 21 and withdrawn claims 19 and 20.

Claim 1 is amended to increase clarity by replacing in lines 2 and 4 the term "an inorganic or organic substrate, " with "a glass, ceramic or polymeric substrate" (support on page 4 last paragraph); to insert at the end of step b) the phrase "to produce a layer which is optionally dried"; to specify that step c) requires irradiating the layer of step b) with from 1 to 1000 mJ /cm² of UV/Vis light (page 21 line 20) having wavelengths from 150 to 700 nm (page 21 lines 2-3) to fix the one or more photoinitiators in the layer of step b) (page 3 lines 10-11)"; to insert at the end of step c) the phrase "after said irradiation" ; and to insert at the end of the claim the clarifying statement "wherein a coated substrate comprising a glass, ceramic or polymeric substrate affixed to the irradiated layer of step b), which layer of step b) is affixed to a deposited metal, half-metal or metal oxide layer is obtained".

Claim 2 is amended for clarity by inserting "in" into line 1 immediately prior to the term "step d)".

No new matter is added.

IDS

The Examiner states that the information disclosure statement is not entered because there is no concise explanation of the relevance of one of the non-English references, H. Jacobasch et al, Farbe & Lack, 99, Jahrgang 7/1993, p 603-607 provided by the person most knowledgeable about the content of the reference. Attached is a summary of the relevance of said reference provided by G. Weidenbrueck, the person who drafted the application.

Rejections

Applicants kindly thank the Examiner for his time in clarifying some of the rejections in the phone conversation of October 7.

Claims 1-6, 8-11 and 21 are rejected under 35 USC 102(b) as anticipated by Bauer, US 6,548,121.

Applicants respectfully traverse the rejections.

Bauer discloses a process for coating a substrate in which a substrate is pre-treated with plasma, corona or a flame treatment prior to the application of photo initiator compounds containing ethylenically unsaturated groups which are then allowed to react with the pretreated surface to form a primer layer onto which is deposited a metal, semi-metal or metal oxide from the gas phase in the presence of UV-light.

According to the instant invention, a primer layer is prepared by pretreating the surface with corona discharge etc, followed by applying photo initiators or a mixture containing photo initiators and monomers or oligomers containing ethylenically unsaturated groups and then this layer is irradiated with a specified dose of light. Onto this irradiated primer layer is deposited a metal, semi-metal or metal oxide from the gas phase which deposition may occur in the presence of UV-light.

Applicants respectfully submit that the processing steps of the instantly amended claims, in particular the radiative curing of the primer layer before metal, semi-metal or metal oxide deposition, are different from those of Bauer, as Bauer does not include or suggest instant step c) where the layer of step b) is irradiated to fix the photoinitiators, and no anticipation exists.

Applicants respectfully point to page 10 paragraph 21 of the present Action, which suggests that the claims do not specify what the irradiation step c does, and therefore it could mean any exposure to any light source for any reason. Further, in the paragraph that bridges pages 10 and 11, the Action states that it is obvious to irradiate the layer, because exposing it to ambient light to look at it is the same as exposing it to irradiation. While Applicants believe that this is perhaps an overly broad reading of the claim language and is not necessarily consistent with how one skilled in the art would understand the wording, Applicants respectfully submit that the instant amendments to step c) of claim 1 overcome any deficiency in this regard.

Applicants respectfully submit that the rejections of claims 1-6, 8-11 and 21 under 35 USC 102(b) over Bauer, US 6,548,121 are addressed and are overcome and kindly ask that the rejections be withdrawn.

Claims 11-13 and 15 are rejected under 35 USC 103(a) as obvious over Bauer, US 6,548,121.

Claims 7, 14, and 16 are rejected under 35 USC 103(a) as obvious over Bauer, US 6,548,121 above in view of Kohler US 6,251,963 which teaches using a solvent with photoinitiators.

Applicants respectfully traverse the rejections.

Applicants refer to the discussion above wherein Bauer lacks the step of the instant invention wherein the primer layer is irradiated before the deposition of the metal, semi-metal or metal oxide. This step is also absent from Kohler. Applicants therefore submit that the art does not meet the limitations of the instant claims or direct one to the steps of the instant invention, nor does the art suggest to one the value of this additional step.

Applicants therefore respectfully submit that the rejections of claims 11-13 and 15 under 35 USC 103(a) as obvious over Bauer, US 6,548,121 and the rejections of claims 7, 14 and 16 under 35 USC 103(a) as obvious over Bauer, US 6,548,121 in view of Kohler US 6,251,963 are addressed and are overcome and kindly ask that the rejections be withdrawn.

Claims 1, 3-6, 8, 9, 11-13, 15, 17, and 21 are rejected under 35 USC 103(a) as obvious over Lin US 6,153,503 in view of Bauer, US 6,548,121 above; Kohler US 6,251,963 is added to reject claims 7, 14 and 16.

Applicants respectfully traverse the rejections.

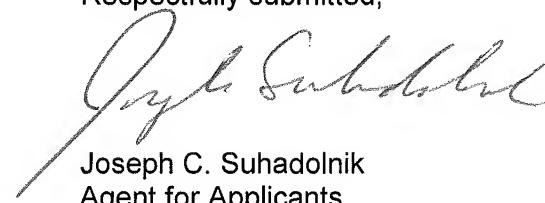
Applicants respectfully aver that Lin does not prepare the product of the instant invention. The instant invention provides a substrate upon which a strongly adhering coating of primer layer and metal, half-metal or metal oxide is formed. In Lin, there is no "strongly adhering primer layer", there is instead an easily removed masking layer, referred to by Lin as a "barrier layer". Any permanent layer in Lin has a metal directly deposited onto the substrate surface. The masking layer and any metal thereon are removed. Prior to the development step in Lin, the metal is adhered to a masking layer which links the metal to the substrate, however Lin makes clear that the masking layer is designed to prevent a strongly adherent layer. Applicants respectfully submit that the practitioner readily recognizes that the temporary layer of Lin is not Applicants' strongly adherent coating.

Applicants therefore respectfully submit that the rejections of claims 1, 3-6, 8, 9, 11-13, 15, 17, and 21 under 35 USC 103(a) over Lin US 6,153,503 in view of Bauer, US 6,548,121 and the rejections of claims 7, 14 and 16 under 35 USC 103(a) over Lin US 6,153,503 in view of Bauer and Kohler US 6,251,963 are addressed and are overcome and kindly ask that the rejections be withdrawn.

Applicants respectfully submit that all rejections are addressed and are overcome and kindly ask that they be withdrawn and claims 1-15, 21 be found allowable. Applicants also kindly ask that upon finding said claims allowable, the Examiner rejoin claims 19 and 20 as directed to a novel product produced by the novel processes of claim 1 and 2 and find claims 19 and 20 also allowable.

In the event that minor amendments will further prosecution, Applicants request that the examiner contact the undersigned representative.

Respectfully submitted,



Joseph C. Suhadolnik
Agent for Applicants
Reg. No. 56,880
filed under 37 CFR 1.34(a)

Ciba Specialty Chemicals Corporation
Patent Department
540 White Plains Road
P.O. Box 2005
Tarrytown, NY 10591-9005
Tel. (914) 785-2973
Fax (914) 785-7102

Enclosed: Summary of the relevance of H. Jacobasch et al, Farbe & Lack, 99, Jahrgang 7/1993, p 603-607 provided by G. Weidenbrueck.